
Clean Water....
A New Day for Southeast Michigan
DETROIT METRO WATER DEPARTMENT
DECEMBER 1973

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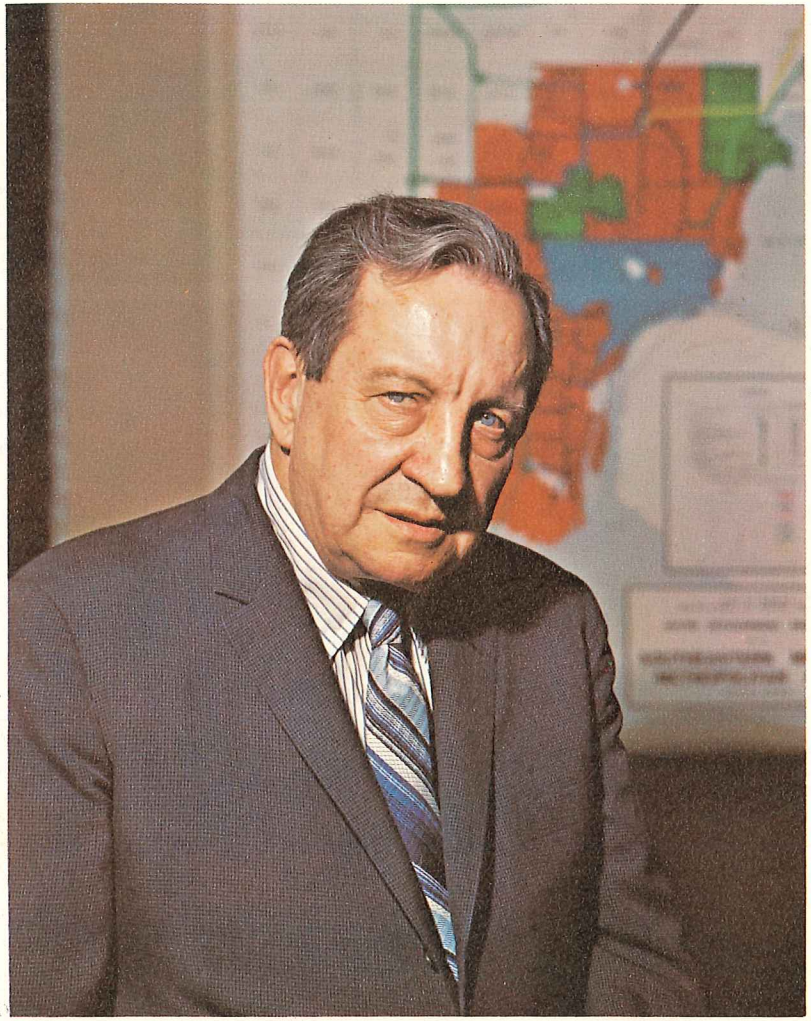
GERALD J. REMUS

General Manager and Chief Engineer

Cover Photo: Lake St. Clair Sunrise

Litho in U.S.A.

A word from the General Manager



GERALD J. REMUS

Dedication of the Regional Interception System and Advanced Treatment Facilities marks an important milestone in Detroit's Water Pollution Control Program. The Detroit Metro Water Department has committed itself to the saving of the waters of southeastern Michigan from the harmful effects of waste disposal. We have implemented a program which leads the nation in total water resources management on a regional basis.

Initial steps were taken in 1957 to implement a regional approach to solving the area's water pollution problems. In 1966, a more updated and comprehensive program was implemented in which the Department used "20-20 vision" to provide clean water for this area beyond the year 2020. It was designed for orderly and effective growth of regional water pollution control facilities while providing for improved water quality in the streams, rivers and lakes of southeastern Michigan. Since the program's inception, improvements in both the Detroit River and Lake Erie have been realized. Visible results show that fishing, boating and other water recreational activities have improved dramatically over the past several years on both these bodies of water.

The cooperation of governmental agencies and individual communities together with the Department's innovative approaches of solving the area's water pollution problems have led to the program's success. The battle is far from over. There will always be room for improvement and a high degree of surveillance will forever be required. Continued cooperation by all concerned individuals will insure future success.

The Detroit Metro Water Department is prepared and welcomes the challenge of the future. We have demonstrated our ability to get the job done, and we will continue to be dedicated to Total Water Resources Management.

THE NEW LOOK

1836 - 1954

HISTORICAL HIGHLIGHTS

Regional Wastewater Plant – 1940

Left – Regional Wastewater Plant – 1973
Showing Expansion Construction

Detroit's water pollution control efforts date back to 1836. At that time Detroit's first sewer, called "The Grand Sewer," was constructed. This sewer carried the community's wastewater to the river, where it was discharged untreated. As the city rapidly expanded, additional sewers were built to handle the load. However, they all discharged without any treatment. This rapid growth produced a serious pollution problem along the entire river front.

The growing hazard was recognized prior to 1909, for in that year the United States and Great Britain signed a treaty which called for the elimination of pollution of waters forming boundaries between the United States and Canada. In 1915, an International Joint Commission conducted surveys to determine the extent of pollution. They later made recommendations for clearing up the pollution, which consisted primarily of the construction of an interceptor sewer paralleling the Detroit River together with a Wastewater Treatment Plant. World War I and the depression of the 1930's delayed construction of the Detroit River interceptor until 1925, and the Wastewater Treatment Plant until 1935.

The Wastewater Treatment Plant cost approximately $23 million, which in its day was a considerable amount. The plant provided screening and sedimentation, with incineration and chlorination. It was designed to serve a population of 2,400,000 and, with some additions, could serve a population of 4,000,000 people.

In the early part of 1940, wastewater was turned into the interceptors and the plant process started. The operation of the plant was assigned to the Detroit Metro Water Department. At that time, wastewater treatment and disposal was provided to several suburban communities which needed help.

The plant was dedicated in June 1940, starting a continuous effort to restore the water quality of the Detroit River and surrounding waters. The seeds of a regional system were thus planted.

After the plant went into service, and as the population further expanded, Detroit continuously developed and improved its wastewater system. Because of this continued expansion of service area outside of Detroit, additional wastewater plant treatment capacity was provided in 1954 with the construction of two new sedimentation tanks.

THE REGIONAL APPROACH 1955-1973

AGENCY FOR THE JOB

Immediately after becoming General Manager of the Detroit Metro Water Department in 1955, Gerald Remus began implementing his bold plan of building a regional water supply system. Arguing that a single, area-wide water system would be cheaper, more efficient and more reliable than the multiple systems being developed. Remus had to convince county and suburban officials to join DMWD's growing system. After a lengthy campaign, the political leaders accepted his recommendations.

Remus patterned the expansion of DMWD's water pollution control program after the successful operation of the water supply program. It was evident to him that water pollution could not be controlled except by the united efforts of all metropolitan communities. In 1957, a $33 million program was launched which called for improved treatment as well as enlargement of the service area to include all the metropolitan area. This program was subsequently updated in 1966, after Federal public hearings on water quality improvement were held. Added impetus was given to the program by the Supervisors Inter-County Committee. It called for the use of the Detroit Metro Water Department as the regional agency for wastewater interception and treatment.

OBJECTIVES

Systematic and orderly development of a single pollution control system for the Detroit Regional Watershed.

Construction of an area-wide wastewater interceptor system.

Installation and operation of facilities for advanced wastewater treatment.

Further reduction of stormwater overflows.

Acceleration of industrial wastewater control on a cooperative government-industry basis.

Improved methods of waste disposal for pleasure boats and freighters.

Regulation of water levels in the lake St. Clair – Detroit River – Lake Erie complex to aid in stream and shoreline beautification.

Tighter control of lake and river dredging and landfill practices.

International assurance that the Canadian communities will take equivalent action to enhance the water quality of the Great Lakes.

Continuation of a broad and sound financing base (founded upon user charges) to assure uninterrupted progress.

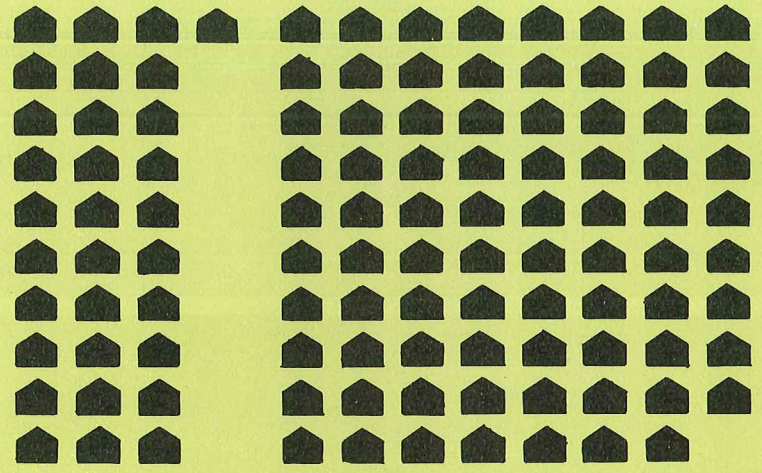
FINANCING

The construction and expansion of the regional system must be orderly and systematic in order not to jeopardize its financing capabilities. Capital improvements for the wastewater plant, regional interceptor system and stormwater runoff control are financed with a combination of government construction grants, revenue bonds and current revenues. The rate of expansion will continue to be governed by the availability of Federal and State aid. Capital costs not covered by Federal or State aid will generally be financed with revenue bonds. To insure that these bond obligations are met, long term contracts are signed with each community which commits them to participate in the program as they develop and grow.

All income for payment of principal and interest on the revenue bonds, and for operation and maintenance expenses are derived through user charges (rates) for wastewater disposal service. Neither water supply revenues nor local tax money is available to the Pollution Control Program. This program is, and must be, self-sustaining. Estimated net revenues must be sufficient to provide 150 percent of the largest requirement for bond principal and interest due in any future year.

GROWTH 1955 - 1973

COMMUNITIES UNDER CONTRACT FOR SERVICE
(including Detroit)



31
Fiscal 1956

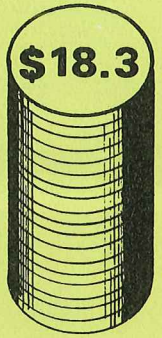
79
Fiscal 1973

OPERATING REVENUES

Fiscal 1956

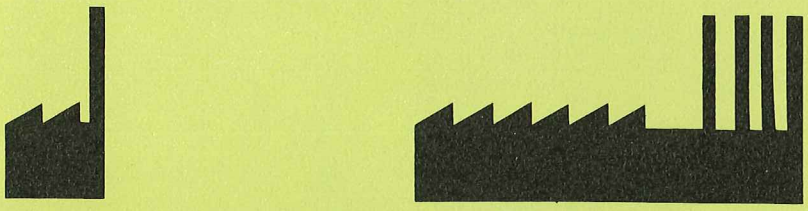
MILLION

Fiscal 1973



MILLION

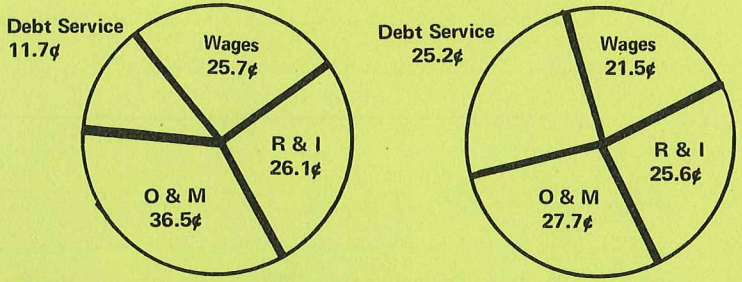
ASSETS
(PLANT, PROPERTY AND EQUIPMENT)



$29.9 million
Fiscal 1956

$246.7 million
Fiscal 1973

DISTRIBUTION OF REVENUE DOLLAR



R & I — Replacements and Improvements
O & M — Operation and Maintenance

Fiscal 1956

Fiscal 1973

BUILDING THE REGIONAL SYSTEM

The 1966 Water Pollution Control Program for the Detroit Regional Watershed proposed a three phase approach to solving the area's problems. The phases were scheduled in a way which would allow the most pressing problems to be resolved first, while providing for future growth in later phases. The map on the inside of the back cover shows the updated scheduling for the various components of the program. The basic phases, however, remain the same.

Phase I provides for the construction of:

Regional sanitary wastewater interceptors in Wayne, Oakland and Macomb counties.
Advanced treatment facilities at Detroit's regional wastewater plant.
Stormwater overflow control facilities utilizing existing sewers;
Relief sewers and sewer renovation in the City of Detroit.

Phase II provides for:

Construction of regional sanitary wastewater interceptors to serve Washtenaw, Monroe, Oakland and Wayne Counties and extension of the regional sanitary wastewater interceptor system in Macomb County;
Expansion of Detroit's regional wastewater treatment plant;
The first stage of the Huron River Regional Wastewater Treatment plant; and
Construction of additional storm water retention facilities.

Phase III provides for:

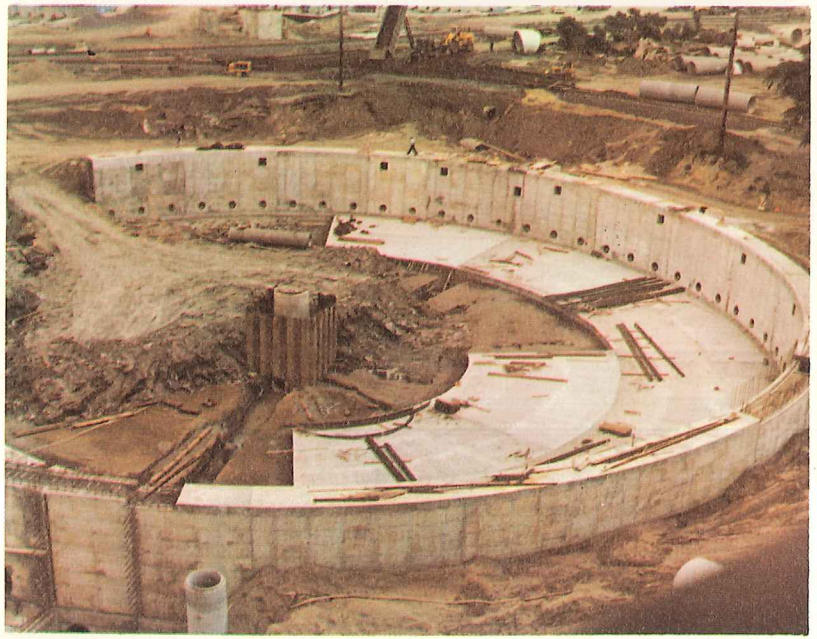
Further expansion of regional wastewater treatment plants in Detroit and at the mouth of the Huron River and the extension of regional sanitary wastewater interceptors to serve other portions of Monroe and Washtenaw counties. During this phase, the St. Clair Regional Wastewater Treatment Plant and the regional sanitary wastewater interceptor system are to be constructed to provide service for the St. Clair County area. The Phase III construction period is beyond the year 2020.

On-Line with Phase I

Construction of the major elements of Phase I were delayed until 1969, because of a lack of Federal funds. Since that time, construction has progressed rapidly and all facilities required to meet today's water quality standards, agreed to with the Michigan Water Resources Commission, have been completed. Placing these facilities into service at this time will further increase the water quality of the Detroit River and Lake Erie.

A total of $239 million has been invested in the construction of Phase I facilities since 1966. The majority of these funds were provided by Feder-

Regional Interceptor – 11 ft. diameter



Secondary Clarifiers – 200-ft. Diameter

al and State grants. The facilities which were constructed with these funds include:

WASTEWATER TREATMENT PLANT EXPANSION

A 300 mgd oxygen aeration tank; one 150 mgd air aeration tank; one 190 tons/day oxygen plant, two 105,000 cfm air blowers; two 150 mgd, 250-ft. diameter primary clarifiers; nine 50 mgd, 200-ft. diameter secondary clarifiers; sixteen additional vacuum filters, eight 25-ft. diameter multiple hearth incinerators, improvements to lab sampling system; new laboratory and control buildings, new maintenance building, tunnels, conduits, intermediate pumping facilities, plant renovation and road and railroad relocations.

REGIONAL INTERCEPTOR SYSTEM

INTERCEPTORS AND CONTROL FACILITIES

Size	Length	Type	Size	Number
12" thru 54"	3.8 miles	Parshall Flume	9"	2
4'- 6"	4.1 miles	Parshall Flume	12"	4
5'- 0"	4.6 miles	Parshall Flume	18"	2
8'- 0"	4.5 miles	Parshall Flume	24"	2
8'- 9"	3.4 miles	Parshall Flume	5'- 0"	1
9'- 6"	3.3 miles	Parshall Flume	10'- 0"	1
10'- 6"	1.7 miles	Magnetic Meter	16"	1
11'- 0"	6.9 miles			
12'- 9"	7.8 miles			
17'- 6"	1.1 miles			
Total Length	41.2 miles			

PUMPING STATIONS

Northeast	Installed Capacity	400 cfs.
Clintondale	Installed Capacity	120 cfs.

STORMWATER OVERFLOW CONTROL FACILITIES

Monitoring and Remote Control Equipment

Rain Gauges	25	
Sewage Level Sensors	214	
Stormwater Overflow Points	110	
Remote weather bureau radar access unit	1	
Computer (16^K core) with 1/0 peripherals	1	
Storage Facilities — In System (monitored)	12	(170 mg cap.)
Suburban Retention Basins (monitored)	4	(120 mg cap.)
Suburban Pumping Stations (monitored)	8	

Monitoring System includes Detroit and 17 suburban communities

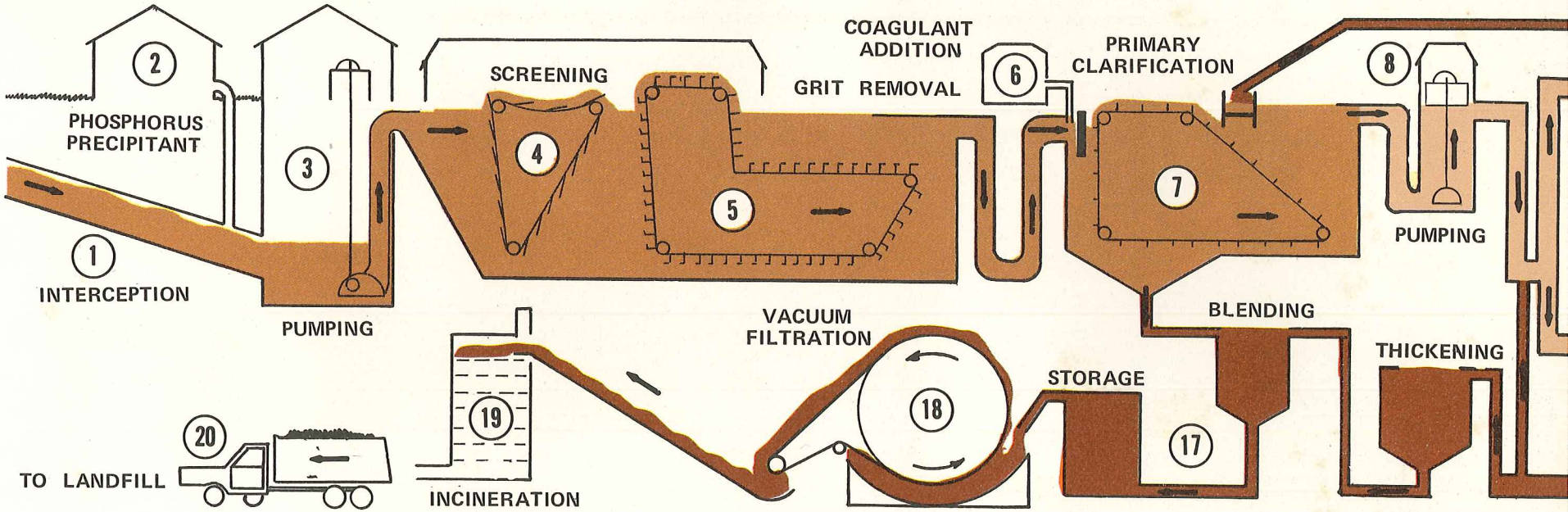
THE FUTURE

As Phase I is dedicated and placed into service there is continued construction activity going on at the Wastewater Treatment Plant. This construction reflects the continued expansion of the plant beyond the initial phase. Similar activity is present at many places in the metropolitan area where interceptor facilities are being expanded to provide additional wastewater disposal service for suburban communities.

The Detroit Metro Water Department has been awarded an $80.25 million grant by the Environmental Protection Agency. This constitutes 75% of the $107 million of approved pollution control projects for fiscal 1973. The balance of funding will be provided by the State of Michigan ($5.35 million) and by local funds generated from sewage disposal charges ($21.40 million.) Another $130 million is required to continue expansion of the program in 1974, with an additional $139 million needed in 1975. These funds will enable DMWD to meet the August 1976 Water Quality Standards of the State of Michigan and puts the Department well on the way towards meeting the new "Clean Water Act" standards adopted by Congress on October 18, 1972. Also proposed is $85 million in work for combined wastewater overflow control.

COST SUMMARY

Invested Since 1966	$239 Million
Under Design for Fiscal 1973	$107 Million
Needed for Fiscal 1974	$130 Million
Needed for Fiscal 1975	$139 Million
Proposed for Wastewater Overflow Control	$ 85 Million
Total	$700 Million



DETROIT'S WASTEWATER

The Detroit Metro Water Department collects and treats the wastewater of most of southeastern Michigan communities located in Wayne, Oakland and Macomb counties. The plant treats flow from residential, commercial and industrial sources as well as storm water from Detroit and some of the adjacent suburbs.

1. The wastewater flow to the plant, from the region, can exceed 1,200,000,000 gallons per day. The average flow is 800 MGD (million gallons per day) and is ever increasing. The wastewater arrives at the plant via two large gravity interceptor sewers, 12' and 16' in diameter. A third major interceptor is under construction, while a fourth is being planned.

2. At this point, minute quantities of ferrous chloride are injected into the wastewater which binds up most of the phosphates into a settleable form. The State requires the removal of 80% of all phosphorus now, and 90% by the end of 1975.

3. Eight huge pumps lift the wastewater nearly 40 feet allowing it to flow through the primary portion of the plant by gravity.

4. Bar screens capture most rags, sticks, strips of plastic and other coarse material which are automatically removed. The material is dropped onto a conveyor which deposits it in containers for later removal to a sanitary landfill.

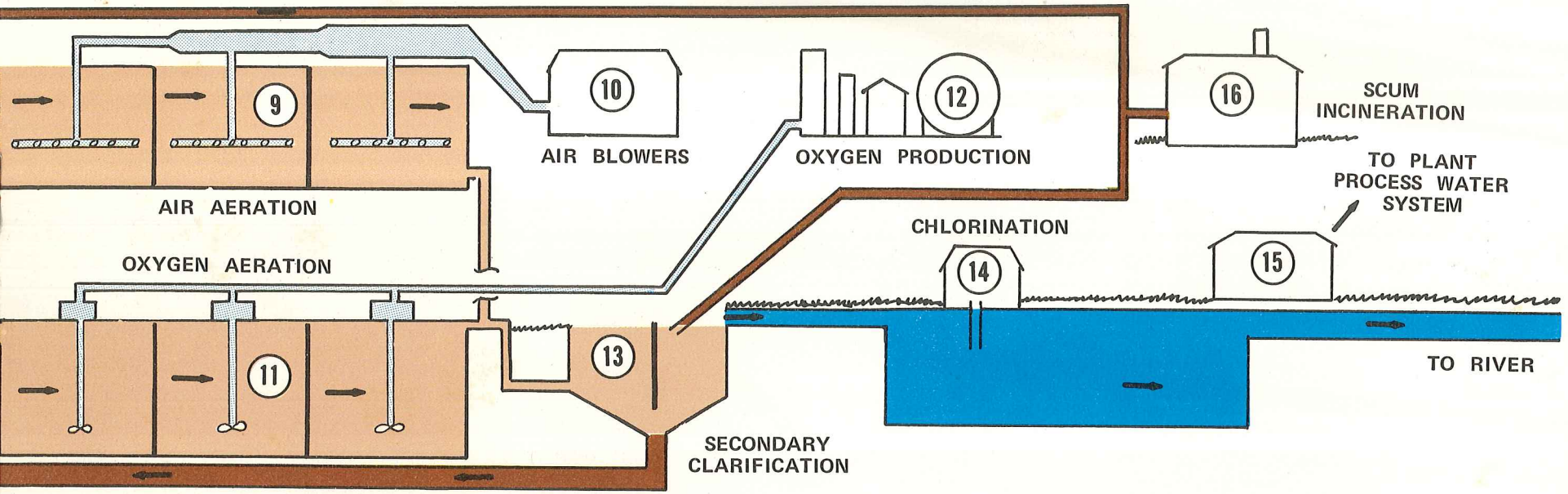
5. Long narrow grit chambers cause the wastewater to slow down, and drop heavier material such as sand, glass, bottle caps, egg shells and coffee grounds to the bottom. This material is also removed to a landfill.

6. A snythetic chemical (polyelectrolyte or polymer) is added to aid coagulating and settling suspended particles in the primary clarifiers.

7. Primary clarification (both rectangular and circular tanks are used): As the wastewater makes its one-hour journey through the primary clarifiers (sedimentation tanks) approximately 50% of the organic matter settles to the bottom as sludge, and is removed. At the same time oils, greases and other floatable materials are skimmed from the surface. These items are handled in steps 16 and 17.

8. The flow from the primary portion of the plant is collected and transported by tunnel to the advanced treatment portion of the plant. Here two large variable speed pumps lift the flow some 25-ft. so that it may complete the remainder of its journey, by gravity, to the river.

9. At present two similar activated sludge processes are being used. One is the standard method where air is bubbled through the primary effluent allowing certain naturally occurring bacteria to consume most of the remaining organic material. The activated sludge tanks are



TREATMENT PROCESS

twice as deep as normal to preserve land and save on construction costs.

10. Huge blowers compress and transport the air required in the standard activated sludge process.

11. The second activated sludge tank is covered and employs the use of pure oxygen, and is able to handle twice the flow of the standard tank in the same time period. If this new oxygenation process proves to be more economical, as is expected, the first tank will be converted in the future.

12. A cryogenic process oxygen plant produces all of the oxygen consumed each day as well as a small excess of liquid oxygen which is stored for standby use.

13. The wastewater now enters the specially designed (and patented) peripheral inflow and discharge secondary clarifiers where most of the scavenger bacteria settle out as sludge. A portion of this sludge is returned to the activated sludge banks to keep up the bacterial population, while the remainder is disposed of as explained in step 17. The nearly pure reclaimed water flows over the top of the weirs to the chlorine contact chamber.

14. The treated effluent is now dosed with chlorine to assure that practically all bacteria is killed. The renewed water now meets swimming beach quality. This flow rejoins the river and is dispersed. The flow in the river is at least 100 times greater than the flow from the plant.

15. A portion of the treated flow is extracted for use as plant process water as required in steps 16, 17 and 19.

16. The scum from the primary clarifiers is burned in a specially constructed water-hearth furnace at 2000°F. The air pollution control equipment uses processed water which is returned to the interceptor.

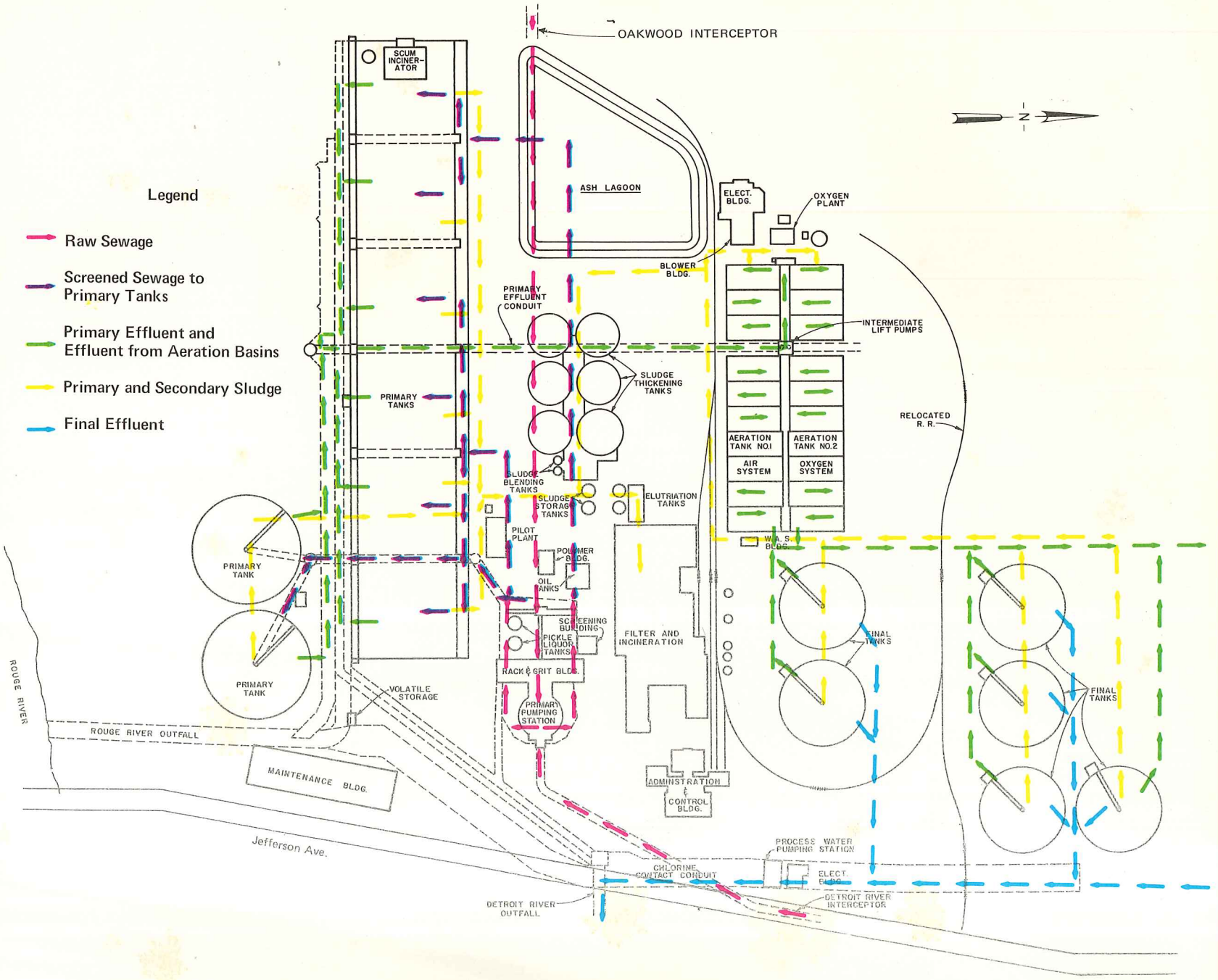
17. The waste activated sludge from the secondary clarifiers is transported to the gravity thickeners, thickened and blended with primary sludge and then stored before being further processed.

18. The blended sludge is now dewatered using large rotary vacuum filters. The material extracted from these filters, referred to as sludge cake, is dropped onto conveyors.

19. The sludge cake is transported by conveyor to the top of the world's largest municipal multiple hearth furnaces and incinerated. Detroit was one of the nation's first communities to add air pollution control equipment to its incinerators. This equipment also uses reclaimed processed water.

20. The ash which is the inert residue of the material removed from the wastewater, is transported to a landfill for burial which completes the wastewater treatment process.

WASTEWATER PLANT FLOW DIAGRAM



PLANT FLOW AND CAPACITY DATA

PUMPING STATION

8 Main pumps — total capacity 1,300 million gallons per day.
Largest pumps have 1250 H.P. motors.
There are no screens ahead of the pumps.

RACK AND GRIT BUILDING

8 Mechanically cleaned bar racks.
16 Grit collectors - V-shaped buckets on chains.

PRIMARY SEDIMENTATION TANKS

12 Covered rectangular tanks, each containing 7 channels 16 ft. wide, 272 ft. long and 16 ft. deep.
Wood flight scrapers bring sludge to sumps and skim the scum to hoppers.

2 Circular 250 ft.diameter 150 mgd each.

AERATION TANKS

1 Air aeration tank — 150 mgd.
2 105,000 cfm air blowers.
1 Oxygen aeration tank — 300 mgd.
1 Oxygen plant — 190 tons/day.

FINAL SEDIMENTATION TANKS

6 200 ft.diameter — 50 mgd.
3 more under construction.

SCUM INCINERATOR

1 Water hearth incinerator capable of burning 90 tons/day of grease and other floatables.

FILTER BUILDINGS

12 500 sq.ft. — area rotary vacuum filters.
16 750 sq.ft. area rotary vacuum filters.
7 Vacuum pumps 48,450 cfm capacity.

SLUDGE INCINERATORS

6 22 ft. diameter, multiple hearth incinerators.
6 25 ft. diameter, multiple hearth incinerators.
2 more under construction (25 ft.)

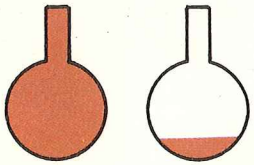
CHLORINATION BUILDING

Equipment capable of chlorinating at the rate of 100,000 lbs. of chlorine per day.
3 Railroad cars on siding used as storage tanks for liquid chlorine.

PRESENT DEGREE OF TREATMENT

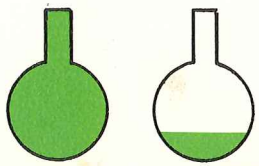
The coliform count in effluent will not exceed 1000/100 ml — This meets swimming beach standards

83% SOLIDS REMOVAL



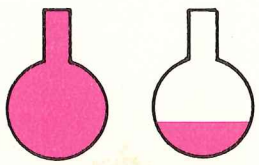
750-1000 TONS/DAY REMOVED

80% BOD REMOVAL



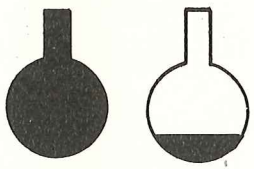
350-500 TONS/DAY REMOVED

70% PHENOL REMOVAL



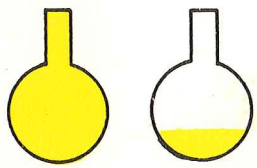
1500-2000 LBS/DAY REMOVED

80% OIL REMOVAL



187 TONS/DAY REMOVED

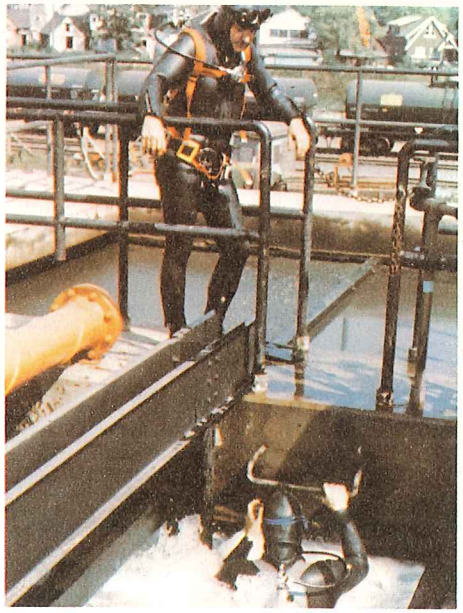
80% PHOSPHORUS REMOVAL



35,000-47,500 LBS/DAY REMOVED

INNOVATION

Phosphorus Removal Pilot Plant



Divers Observe Simulated Deep Tank Aeration Process

To be a leader usually requires some pioneering and innovation. The Detroit Metro Water Department has and will continue to use new ideas and approaches in establishing both the administrative and treatment processes to solve the area's water pollution problems.

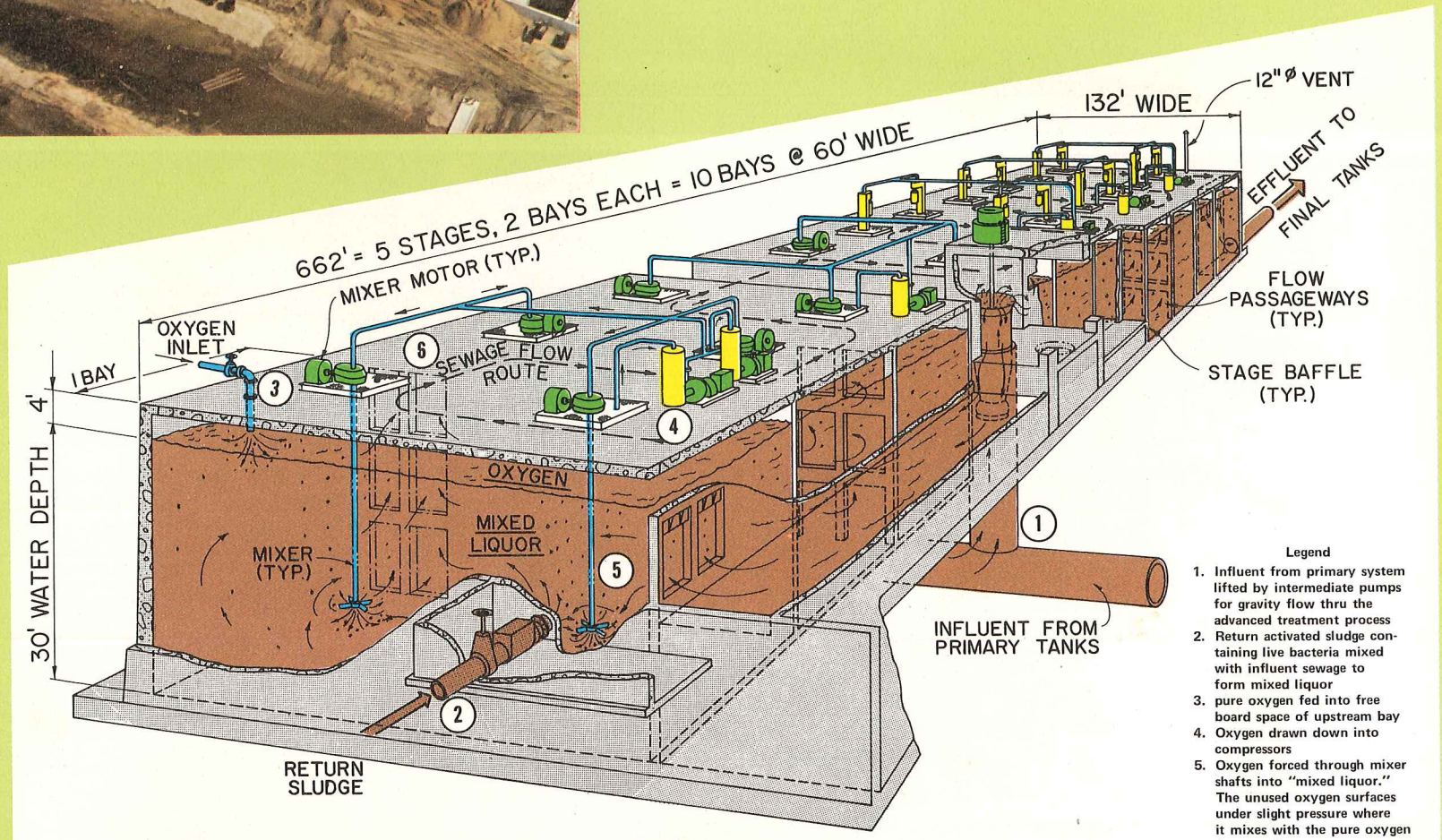
The Department has used the same type of administrative and financing capabilities for the water pollution control program as it used to develop the regional water supply system, which is one of the best in the world. An experienced organization, which includes accounting, business, engineering, operating and personnel divisions will continue to manage the existing pollution control system, and develop necessary facilities for the future. Long term contractual agreements for wastewater disposal service with suburban communities, together with suburban representation on the Board of Water Commissioners will insure an orderly expansion of the regional system, with benefits for all parties concerned.

With Federal and State assistance, the Department conducted research programs dealing with phosphate removal, polymer additions and combined sewer overflows. Research into innovative methods of processing wastewater were also conducted which resulted in the design of deep aeration tanks, a pure oxygen-activated sludge system, and patented high-over-flow-rate secondary clarifiers.

These research efforts paid a double dividend. The phosphate removal process was developed utilizing "pickle liquor" (ferrous chloride.) The "pickle liquor" is a waste product of the steel processing industry, and is a pollutant. Use of this "pickle liquor" thus solved two pollution problems.

The pure oxygen-activated sludge system provided a highly effective method for providing advanced treatment. This system utilizes pure oxygen which is bubbled through the wastewater to keep certain bacteria alive. The bacteria scavange most of the dissolved organic materials and remaining solid particles from the wastewater. This system requires less land area than the normal aeration system. Making maximum use of land, of course, offered a cost savings, but it also required that fewer families be relocated for the required expansion.

Top Right — Oxygen Aeration Tanks
Bottom Right — Air Aeration Tanks
Top Left — Oxygen Production Plant and Storage
Bottom Left — Blower and Electrical Building

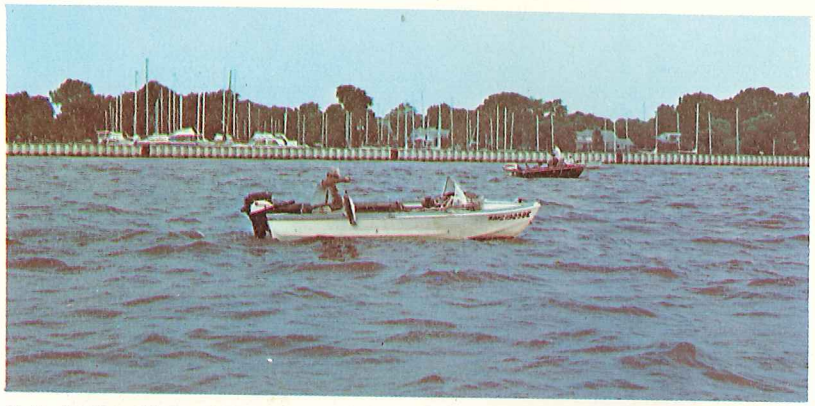


OXYGEN AERATION SYSTEM

Legend

1. Influent from primary system lifted by intermediate pumps for gravity flow thru the advanced treatment process
2. Return activated sludge containing live bacteria mixed with influent sewage to form mixed liquor
3. pure oxygen fed into free board space of upstream bay
4. Oxygen drawn down into compressors
5. Oxygen forced through mixer shafts into "mixed liquor." The unused oxygen surfaces under slight pressure where it mixes with the pure oxygen for recycling
6. As the sewage flows into succeeding bays oxygen is continuously cycled through the liquid

RESULTS



Detroit River Walleye Fishing

MAN, ARE WALLEYES BACK!

In case you haven't heard, you Lake Erie anglers, the walleye is back!

Back, in a way most fishermen wouldn't believe. I hadn't really believed it myself when Ralph Nash called.

"Come on down," he was saying. "You couldn't make the white bass runs last month. Why not try for walleyes?"

He's been fishing the famed Bass Islands of Erie for nearly 30 years, the last 15 as a full-time sport fishing guide.

Few men know the lake better.

Once it was considered the best fishing in the midwest. That was before pollution and commercial fishing cut things down to size.

IT GOT SO, only the knowledgeable few could find the smallmouth bass or the much sought-after walleyes ... Nash, Dick Dunlop, Glen Lau and maybe a few others.

Some left; some quit guiding. Today, only Nash and Dunlop are full-timers, "although a lot of weekend specialists wander in "now that the walleyes are easy to get."

Things have surely changed.

We picked up two scrappy two-pounders at the first stop.

"You want to keep those little ones?" he asked. Little ones? Two pound walleyes?

"Heck, we threw away more'n a dozen like those two days ago," he mused.

The next stop, I found out what he meant.

The nightcrawler I was slowly bouncing on the reef suddenly stopped, as if hooked into a log. The rod bent over almost double as that "log" moved off slowly, but purposefully.

"Ye gods!" I exclaimed. "Certainly not a walleye?"

"Line go slack when he hit, then jerk hard?" Nash asked. Yea! "It's a walleye."

SIX OR SEVEN minutes later a rolling flash of yellow flank confirmed the fact as he worked up toward the boat.

"Not bad," Nash commented, "but I've seen much better off this reef. Took 28 off here last week with a party, and half of 'em musta been bigger than this."

My scale showed the walleye to weigh slightly over six pounds.

Fifteen minutes later, Nash lost a walleye at the boat, one that was much bigger than my boated fish.

Clippings: Courtesy Detroit News

Shortly after the implementation of the 1966 Water Pollution Control Program, the water quality in the Detroit River and Lake Erie began to improve. Local newspapers published articles of improved fishing conditions in both bodies of water. "Michigan Outdoors," a Channel 7 television program with state-wide coverage, produced a special in July 1973 about the improved fishing and recreational conditions in the Detroit River. Stories of new fishing records, the appearance of coho salmon, together with reports of improved boating and swimming became more common.

Since April 1970, the Department has used the method it developed for removing phosphates and other substances blamed for the accelerated aging of Lake Erie. With this new treatment, the waste load to the Detroit River and Lake Erie is cut by about 1,500,000 pounds per day.

Improvements to the plant chlorination system has resulted in elimination of practically all bacterial pollution, thus improving river quality and meeting swimming beach standards. These standards were met June 1971.

Implementation of the sewer monitoring and remote control system has reduced the amount of combined sewage discharged into the Detroit River due to storm overflow, by 6,000,000,000 gallons since 1971. This is 60% reduction of the dirt which was dumped prior to that time.

DETROIT GETS RIVER SAFE TO SWIM IN

It is now safe for you to go for a swim or to do a little water skiing in Detroit's waste water.

And, while no one will likely care to do these things, it may be comforting to know for those who boat or ski on the Detroit River that the waters will be much less polluted.

This has happened because of Detroit's compliance with the first of several water pollution control standards set by the state and federal governments.

THE STANDARD, which had a deadline of June 15, requires control of coliforms (the bacteria found in human waste). So the city's waste water is safe for skin contact, and unlikely to transmit human disease.

The standards — known for years as the "swimming standard" for safety at the beach — permits no more than 1,000 organisms per 100 mililiters of water.

To meet it, Detroit is going to treat its 750 million gallons of waste water each day with 100,000 pounds of bacteria-killing chlorine.

As an interim means of removing more solids and oxygen consuming substances while the advanced treatment facilities were being constructed, the additions of polymers (a synthetic electrolytic chemical) to the sewage enabled removal of an additional 20% of all pollutants. This polymer addition began in 1970.

Belle Isle Beach Swimming – 1973

Sculling The Detroit River

RIVER CLEANED OF OIL POLLUTION

At one time boaters cruising the Detroit River could easily tell how industry in the area was doing – just by sailing through waters deeply stained by factory discharged oil.

But an anti-pollution crackdown that began in 1966 has helped to eliminate most of the globs of oil that spotted the river.

Much of the improvement can be traced to pretreatment facilities installed by most of the firms that discharge industrial wastes into the Detroit sewer system.

"It's a big part of our pollution prevention campaign, eliminating much of the waste at the source," explained Gerald Remus general manager of Detroit's Water Department.

MORE THAN 60 firms – ranging from the auto companies to plating plants with powerful, toxic wastes – have installed pretreatment facilities.

Millions of dollars have been spent to install the equipment. One example is Cadillac Motor Co., currently building an $8 million facility.

"With pretreatment, we can handle about any waste," Remus said.

Thousands of gallons of oil once discharged, along with dangerous plating wastes, into the river, have been brought under control.

"ACTUALLY, this method is a break for industry," Remus continued. "They do not have to have technicians on duty around the clock, and we take over the responsibility of meeting the state and federal standards for clean water."

As a result of the pretreatment program, Detroit is able to handle much of the area's industrial waste.

"There are no separate industrial waste discharges between the Clinton and Rouge rivers," said Remus.

By using the Detroit system, industry is able to "benefit" from federal and state grants to build new treatment facilities that eventually will cut the pollution level of the river and Lake Erie.

A staff of eight keeps surveillance on industry to see that no highly toxic wastes are dumped carelessly into the river.

PLANNERS DESIGNERS AND BUILDERS

PAST OFFICIALS

Mayor

Jerome P. Cavanagh (1962-69)

Common Council

Mary V. Beck (1956-66)
James H. Brickley (1962-66)
Edward Carey (1958-66)
Edward Conner (1958-66)
Louis Miriani (1966-70)
Robert T. Tindal (1968-71)
Anthony Wierzbicki (1968-73)

DMWD Commissioners

Julius Allen (1962-69)
George Fulkerson (1966-72)
Henry Kozak (1968-72)
John H. McCarthy (1964-69)

CONSULTANTS

Hubbell, Roth & Clark, Inc.
Ulrick Stoll
Spalding, DeDecker & Associates

Environmental Protection Agency
Region V

Michigan Department of Natural Resources
Wastewater Management Division
Water Resources Commission

DMWD STAFF

ADMINISTRATION

G. Remus
Ernest Cedroni
George Dehem
John Fahner
Earl Ellenbrook
D. Suhre
Ronald Bekkala
Adolph Ploehn
Erman Fisher
Albert Shannon

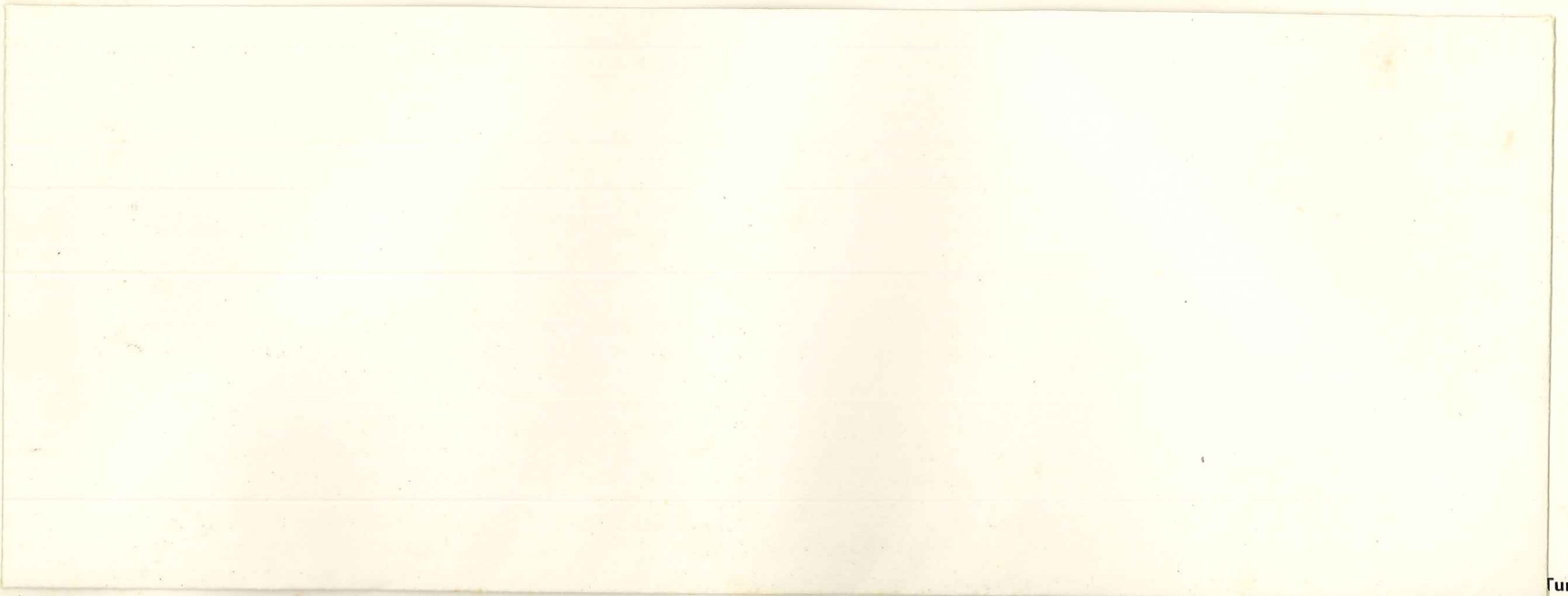
Technical Supervisors

James Kegler
William Herrscher
C. "Bud" Schultz
Eugene Bonadeo

Harriett Abramsen
Gary Aho
John Alexander
S. Paul Baluja
Charles Barksdale
Louis Becker
Benny Benjamin
Harry Bierig
Nancy Branston
Charles Chapin
James Chute
Robert Court
Frank Daskus
A. C. Davanzo
Donald Dix
Lyle Duke
John Duncia
Richard Encelewski
Alfred Ferszt
Douglas Fletcher
Charles Gill
Charles Gray
George Haberer
Henry Ham
George Hisle
Edward Johnson
Denise Jones
Richard Krygiell
Edward Kulik
Henry Lane
Robert Larsen
Julius Lewandowski
William Lusk
George MacDonald
Derold McDonald
William Mortimer
Robert Mount
Robert Opland
Richard Oren
Carl Pelto
Frank Pollard
Gerald Rowinski
Irving Schuraytz
Robert Skrentner
Peter Skupeko
Albert Sommerville
R. Talwalker
Joseph Urban, Retired
Barbara Walker
Thomas Wozniak
John Brown, Retired
A. C. Michael, Retired
Robert Sinks, Retired
Robert Hagen, Resigned
Harvey Werner, Resigned

CONTRACTORS & EQUIPMENT SUPPLIERS

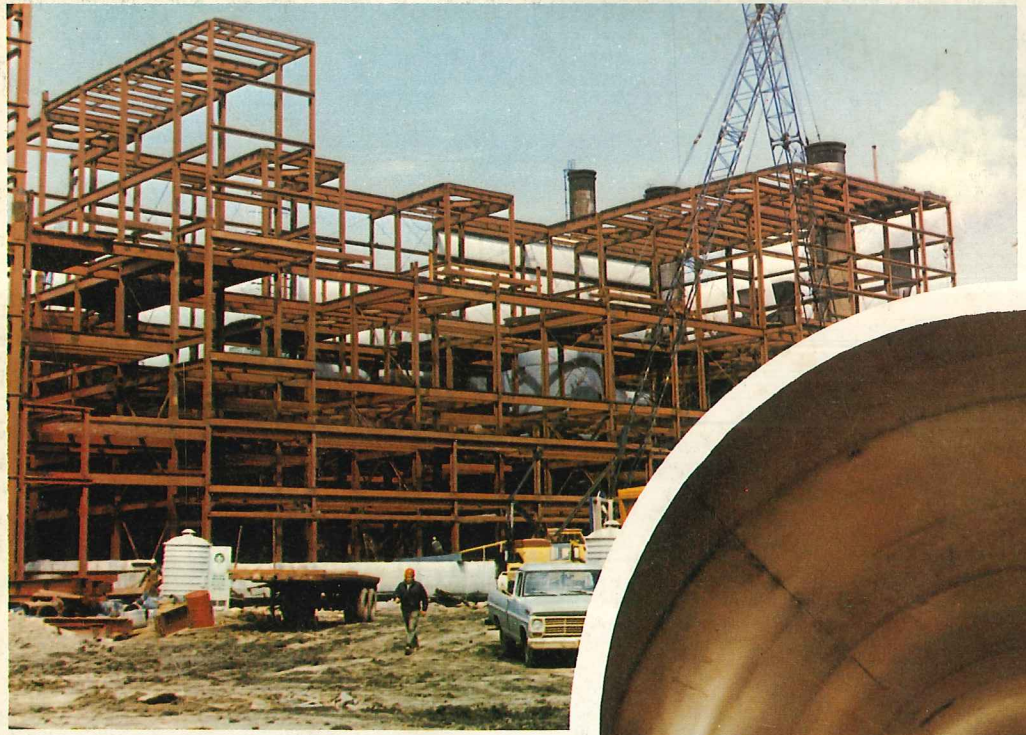
A & P Construction
Allis Chalmers
Barton-Malow Construction Co.
George A. Bass Construction Co.
Bay Construction Co., Inc.
The Boam Company
Byron Jackson Pump Div., Borg Warner
C & C/Bohrer, Incorporated
J. F. Cavanaugh
D & L Construction Company, Inc.
DiMambro Contractors
Dresser Industries, Inc.
Dynamic Construction
L. W. Edison Company
Envirotech Corporation
A. J. Etkin Construction Co.
Federal-Pacific Electric
Rocco Ferrera & Company, Inc.
General Electric
Golcheff Brothers Excavating Co.
S. A. Healy Company, Inc.
C. A. Hull Company, Inc.
International Boiler Works
Jay-Dee Contractors
Joba Construction Co.
J. Mancinelli Excavating Co., Inc.
Mancini Construction Co.
Michigan Drilling, Div. of Michigan Testing, Engr.
Michigan Sewer Construction Co.
Mole Construction Company, Inc.
Nichols Engineering & Research Co.
George A. Odien, Inc.
O'Laughlin Construction Co.
Charles J. Rodgers Construction Co.
Shaw Electric
S & M Constructors
Smith & Andrews Construction Co.
Soil & Materials Engineering, Inc.
Traylor Brothers, Inc.
Union Carbide Corporation, Linde Div.
VanKampen Construction, Inc.
Vito Trucking & Excavating, Inc.
Joseph C. Wolf, Inc.
Zeni & Maguire, Inc.

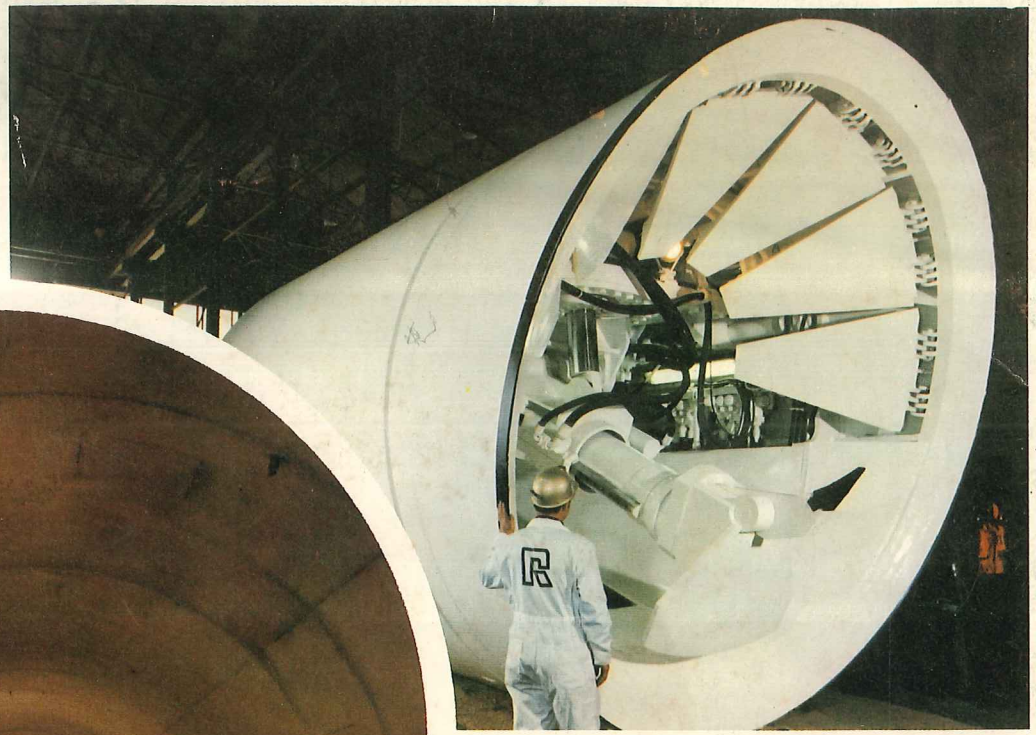


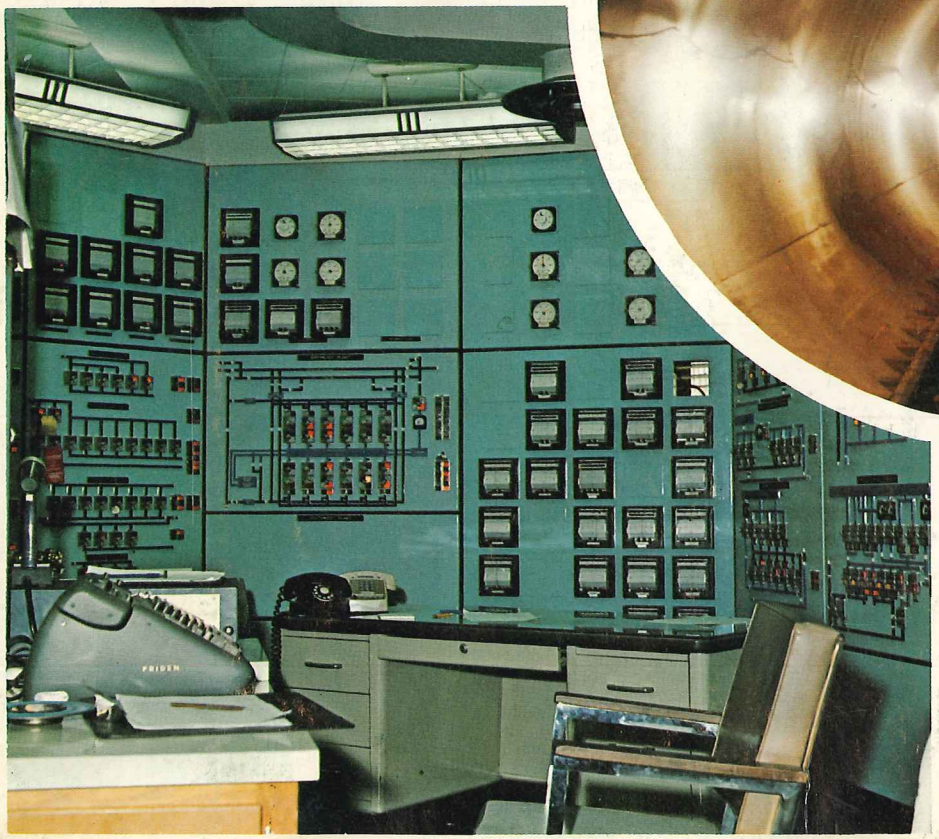
Tunneling Maching

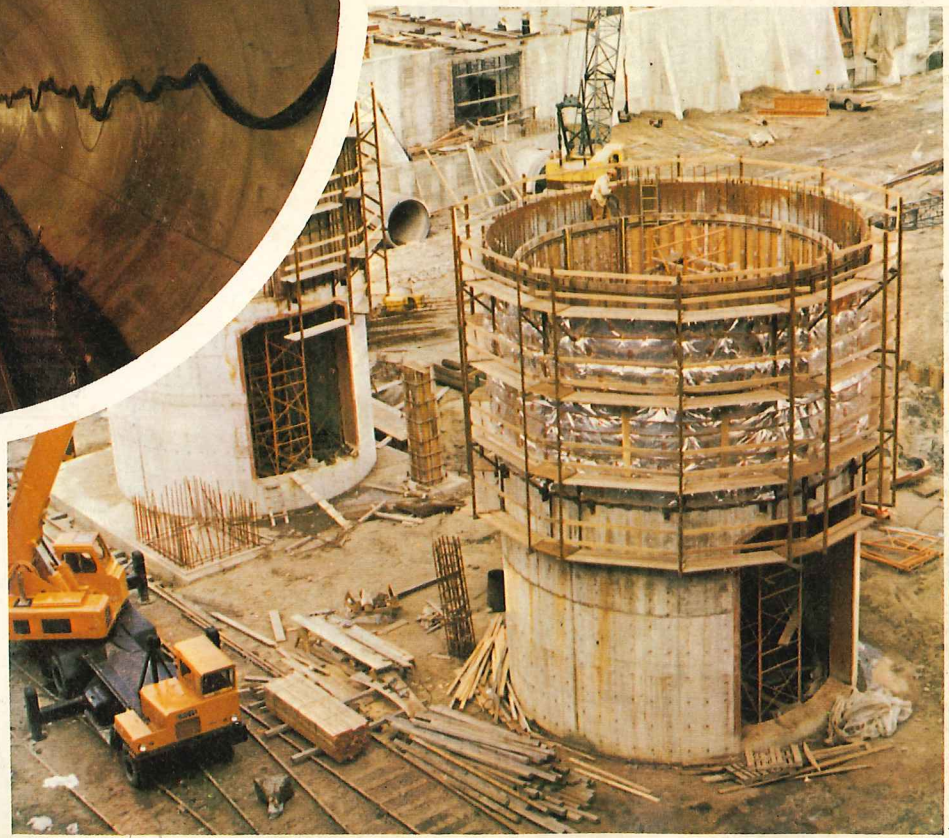
Supervision and Text — F. R. Janeczko / Art Design and Photography — C. Porter / Composing — A. Kaiser

l.l. System Control Center — l.r. Ash Silos — ctr. Oakland-Macomb Interceptor

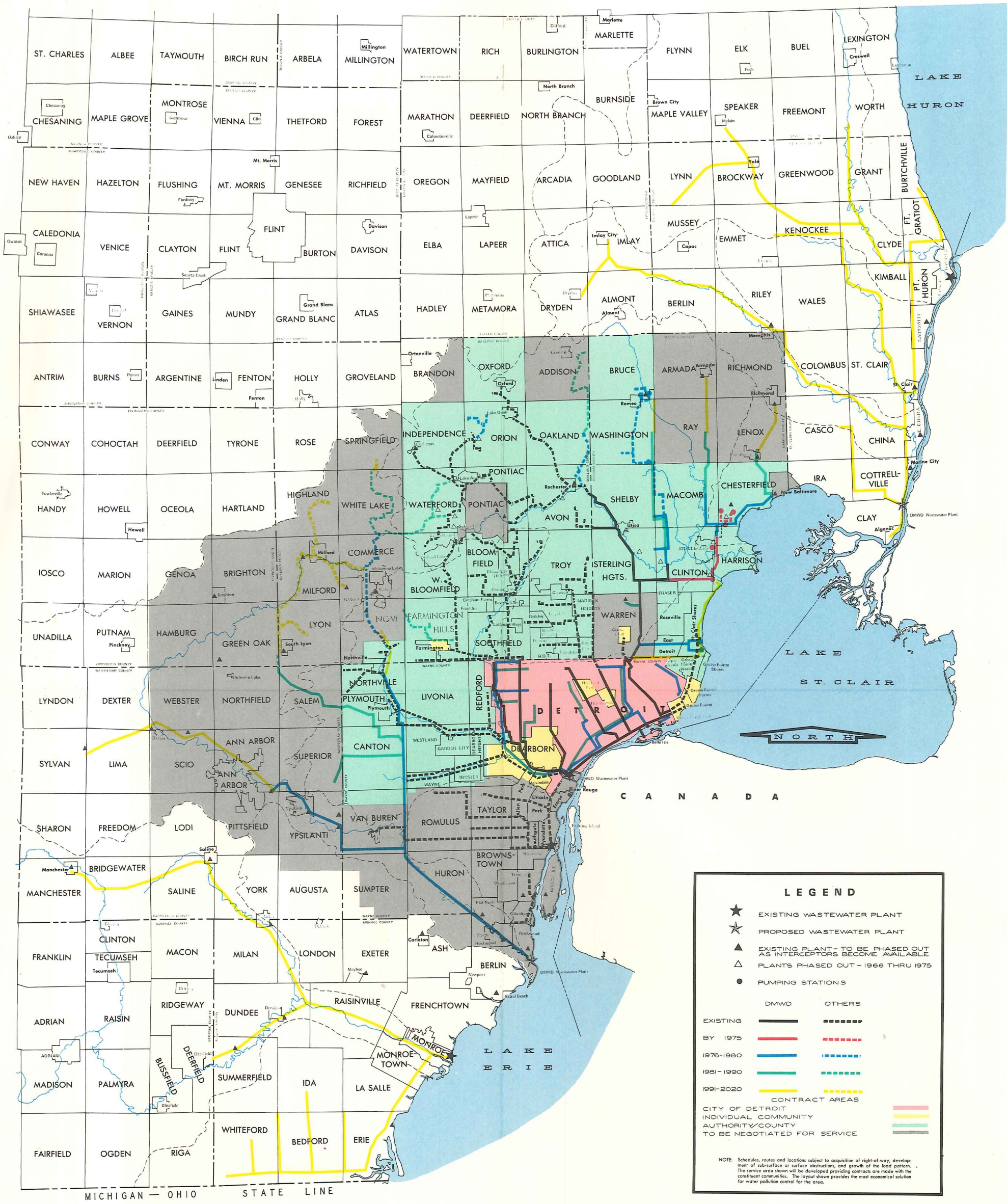








METRO DETROIT WATER DEPT.



DETROIT METRO WATER DEPARTMENT

POLLUTION CONTROL PROGRAM

for the

DETROIT REGIONAL WATERSHED

1974